

Original Article

Frequency and pattern of dermatological diseases among Pakistani Hujjaj during Hajj-1429 (2008)

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Abstract *Background* No study has so far been published to the best of our knowledge to find out the health and disease status of Pakistani *Hujjaj* during *Hajj* season.

Objectives To study frequency and pattern of dermatological diseases among Pakistani *Hujjaj* during *Hajj*-1429 (2008).

Patients and methods This study was conducted at Pakistan *Hajj* Medical Mission Hospital, *Makkah Mukarramah* over a period of 1 month from 27 Nov to 26 Dec 2008. All Pakistani *Hujjaj* reporting to the hospital with dermatological complaints referred to and treated by dermatologist were included in the study. A specially designed proforma having information regarding age, gender, disease and its duration was prepared and filled for each patient separately. Computer programme SPSS 10 was used to manage and analyze the data.

Results A total of 187,154 patients were attended in out-door department of Pakistan *Hajj* Medical Mission at *Makkah Mukarramah* during the period under study. Out of these, 141 (0.07%) patients were diagnosed by the dermatologist to have dermatological ailments. Age of the patients ranged from 20-80 years with a mean of 43.34 ± 12.86 . One hundred and fourteen (80.9%) were males and 27 (19.1%) were females. Seventy nine (56.0%) patients developed dermatological disease during their stay at *Makkah Mukarramah* and *Mashaer*, whereas 62 (44.0%) patients complained of aggravation or recurrence of the pre-existing disease. Various forms of eczema were the most common presentation (n=42, 29.78%), followed by urticaria (n=22, 15.60%) and intertrigo (n=21, 14.89%).

Conclusion Eczema in various forms is the most common dermatological disease among Pakistani *Hujjaj* during *Hajj* season followed by urticaria and intertrigo. Physicians and health personnel must be aware of the risks to appropriately educate and prepare *Hujjaj* in an effort to minimize dermatological and other health problems.

Key words

Dermatological disease, skin diseases, Hajj, pilgrimage.

Introduction

Every year tens of thousands of Pakistanis visit

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the Holy City of *Makkah Mukarramah* to perform pilgrimage (*Hajj*). This year (2008, Islamic year-1429), approximately 165,000 Pakistanis availed this opportunity.¹ Pakistani pilgrims (*Hujjaj*) start gathering at *Makkah Mukarramah* about 4 weeks prior to the *Hajj* and their maximum number reaches and stays there during the month of *Dhul-Hijjah*. Most of

the *Hujjaj* during their stay at the Holy City and the *Mashaer* (*Mina, Arafat, Muzdalifa*-places where *Hujjaj* have to move and stay for prescribed timings to perform hajj rituals during Hajj days starting from 08-12 Dhul-Hijjah) come across a variety of illnesses including dermatological ailments. Such ailments may develop, recur or aggravate because of multiple reasons like overcrowding,² weather conditions,³ changed environs, dietary problems, physical and mental stress of the living conditions as well as that of religious rituals.

Although very few studies have been carried out to find out the pattern of dermatological and other medical ailments among *Hujjaj* of all nationalities,^{4,6} no study has so far been published to the best of our knowledge to find out the health and disease status of Pakistani *Hujjaj* during Hajj season. Carrying out such studies would certainly be useful in planning efficient health care delivery to Pakistani *Hujjaj* in times to come.

The purpose of this study was to find out the frequency and pattern of dermatological diseases among Pakistani *Hujjaj* during Hajj season-2008.

Patients and methods

This study was conducted at Pakistan Hajj Medical Mission Hospital, *Makkah Mukarramah* over a period of 01 month from 27 Nov to 26 Dec 2008, corresponding to 29 Dhul-Qa'dah to 28 Dhul-Hijjah 1429. All Pakistani *Hujjaj* reporting to the hospital with dermatological complaints referred to and treated by dermatologist during the above mentioned period were included in the study. Patients with dermatological complaints treated by non-dermatologists were not included in the study for objective assessment of the results. Similarly

resident Pakistanis and *Hujjaj* from other nationalities with dermatological diseases reporting at Pakistan Hajj Medical Mission Hospital were also excluded from the study. A specially designed proforma was prepared and filled for each patient separately. This proforma included demographic features like age and gender of the patient, diagnosis, duration of the disease and whether the disease appeared for the first time, recurred or aggravated. Diagnoses of all the patients were made clinically as available laboratory facilities were not adequate.

Computer programme SPSS-10 was used to manage and analyze the data. Descriptive statistics like frequencies and percentages were calculated for categorical variables, whereas means with standard deviation were calculated for continuous data.

Results

A total of 187,154 patients were attended in outdoor department of Pakistan Hajj Medical Mission at *Makkah Mukarramah* during the period under study. Out of these 141 patients (0.07%) were diagnosed by the dermatologist to have dermatological ailments. Age of the patients ranged from 20-80 years with a mean of 43.34 ± 12.86 . One hundred and fourteen (80.9%) were males and 27 (19.1%) were females. Seventy nine (56.0%) patients developed dermatological disease during their stay at *Makkah Mukarramah* and *Mashaer*, whereas 62 (44.0%) patients complained of aggravation or recurrence of the pre-existing disease.

Various forms of eczema were the most common presentation (n=42, 29.78%) (**Table 1**), followed by urticaria (n=22, 15.60%) and intertrigo (n=21, 14.89%) (**Table 2**).

Table 1 Frequency of various forms of eczema among Pakistani Hujjaj during Hajj-2008

Sr. No.	Type of eczema	N (%)
1.	Discoid eczema	24 (57.1)
2.	Pompholyx	7 (16.7)
3.	Asteatotic eczema	5 (11.9)
4.	Atopic eczema	4 (9.5)

Table 2 Frequency of dermatological diseases among Pakistani Hujjaj during Hajj-2008

Sr. No.	Dermatosis	N (%)
1.	Various forms of eczema	42 (29.8)
2.	Urticaria	22 (15.6)
3.	Intertrigo	21 (14.9)
4.	Scabies	14 (9.9)
5.	Herpes simplex labialis	12 (8.5)
6.	Pyogenic infections	9 (6.4)
7.	Photodermatitis	8 (5.7)
8.	Drug eruptions	4 (2.9)
9.	Herpes zoster	4 (2.9)
10.	Psoriasis	3 (2.0)
11.	Erythroderma	1 (0.7)
12.	Pemphigus vulgaris	1 (0.7%)

Discussion

Like other health issues, *Hujjaj* develop a variety of dermatological problems during their stay at *Makkah Mukarramah* and other Holy places while performing *Hajj* and other religious rituals for a period varying from 03-06 weeks. A recently conducted study reported dermatological diseases to represent 4.4% to 5.5% of all diseases presented at local hospitals of *Makkah Mukarramah* during *Hajj* season.⁷ However, the percentage of dermatological diseases among Pakistani Hujjaj in our study is much less since the above referenced study presented results of all nationalities.

Various types of eczema were the most common presentation in this study as reported previously by Samdani⁴ and Fatani *et al.*⁸ Approximately four-fifths of these patients had various types of eczema previously and their disease either recurred or got aggravated. The remaining one-fifth who developed eczema for the first time had discoid eczema and pompholyx. Eczema is

one of the commonest dermatological problems encountered in dermatology out-door clinics.⁹⁻¹¹ Although very little good evidence exists for flare factors in eczema, there is some evidence that certain foods, stress and seasonal factors are relevant causes of disease worsening in certain subgroups with eczema.¹² During their stay at *Makkah Mukarramah* and *Mashaer*, *Hujjaj* come across stress, both physical as well as mental, dietary problems, weather changes etc. However, it may not be an easy task to objectively assess the causal relationship between eczema and these diverse factors.

Urticarial eruption was the next common dermatological presentation among Pakistani *Hujjaj*. Approximately 55% of these patients developed urticaria for the first time during *Hajj* season, and the remaining 45% have had such eruptions previously as well. Although only a minority of patients is involved, it has been reported that the most common dermatological manifestation of allergy or intolerance to food and food additives is urticaria. Food allergy generally manifests as acute urticaria and is IgE mediated, whereas food additives aggravate chronic urticaria usually involving non-IgE mediated mechanisms.^{13, 14} During *Hajj* season, Pakistani *Hujjaj* take food from Pakistani, Bengali, Indian or even Arabian restaurants which certainly prepare food commercially and on a large scale. To add to the flavour, different condiments and food additives are used which may well be a source of urticarial eruption. Stress has also been implicated as a causative or aggravating factor for urticaria in various studies.^{15, 16} Drugs, infections¹⁷ and hormonal factors¹⁸ in females are other potential provoking factors for urticaria. Upper respiratory tract infection is a common problem encountered by most of the *Hujjaj*; this infection may also contribute towards development of

urticaria in a few patients. However, the role of all these potential factors in causation or aggravation of urticaria among *Hujjaj* is difficult to evaluate scientifically and in spite of evidence of all these potential factors being implicated, in approximately 50% of cases the eruption of urticaria remains idiopathic.¹⁹

Intertrigo is primarily caused by skin-on-skin friction and is characterized by initial mild erythema that may progress to a more intense inflammation. It is facilitated by moisture trapped in deep skin folds where air circulation is limited. Out of 21 patients having intertrigo, only 2 elderly obese female patients reported with inflammation of sub-mammary region; rest all were males presenting with inflammation and discharge involving groins. Most of the patients (72%) reported with intertrigo immediately after Hajj. The reason probably was hot weather at Arafat and prolonged walking for long distances during Hajj days. Most of these patients were in the age group 30-50 who preferred to walk in that warm weather rather than to avail slowly moving vehicles to reach from one Holy place to the other during performance of Hajj. Moreover, as there is community living at these places, they had no private place to aerate the already occluded groin region, worsening the condition further.

Most of the patients diagnosed to have scabies presented with the disease within 02 weeks of their arrival to *Makkah Mukarramah*. Considering longer incubation period of scabies²⁰, it is quite likely that these patients might have contracted the causative mite prior to the Holy journey and the disease manifested after reaching the Holy City. In Pakistani culture, during last few days prior to the departure for Hajj, many relatives and friends visit the intending *Hujjaj* and stay with them for 2-3 days. Similarly intending *Hujjaj* from small

cities, towns and villages have to stay for 1-2 days at *Haji Camps* located at major cities for certain pre-*Hajj* formalities, prior to their departure.

Although patients presenting with Herpes simplex, vulgaris were few in number, some of these diseases are also said to be associated with stress and other factors like sun exposure and upper respiratory infections etc.²¹⁻²³, factors to which *Hujjaj* may be exposed. Recurrence and aggravation of these diseases can be avoided by proper explanation to and preparation by intending *Hujjaj*, about living conditions, dietary problems, weather and details regarding religious rituals. Similarly photodermatitis and drug eruptions are also preventable with proper pre-travel counseling.

Physicians and health personnel must be aware of these risks to appropriately educate and prepare these travelers in an effort to minimize dermatological and other health problems.

Conclusion

Eczema in various forms is the most common dermatological disease among Pakistani *Hujjaj* during Hajj season followed by urticaria and intertrigo. These diseases either develop for the first time or recur and aggravate in the new environment. Physicians and health personnel must be aware of the risks to appropriately educate and prepare *Hujjaj* in an effort to minimize dermatological and other health problems.

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